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PATENT APPLICATION
10/599,438

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Ulrich Craemer et al.
Serial No.:	10/599,438
Date Filed:	February 27, 2008
Group Art Unit:	2863
Confirmation No.:	8870
Examiner:	Cheung, Manko
Title:	METHOD FOR RECOGNIZING A SENSOR TYPE

MAIL STOP – AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In response to the Final Office Action mailed December 8, 2009 and Advisory Action mailed March 2, 2010, Applicants respectfully submit the following remarks and request favorable action thereon.

REMARKS

In the December 8, 2009 Final Office Action, the Examiner rejected all pending Claims 1-15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,982,290 issued to John G. Berger et al. ("*Berger*") in view of U.S. Patent No. 6,111,530 issued to Sung Hm Yun ("*Yun*") and U.S. Patent Application Publication No. 2004/0158435 filed by Richard D. Slates et al. ("*Slates*").

Applicants explained how these rejections are legally insufficient in Applicants' Response to Final Office Action filed February 27, 2010. However, the Examiner maintained the rejections in the March 2, 2010 Advisory Action.

Applicants submit that the Examiner's rejections are based on a fundamental lack of understanding of the technology involved. In particular, with all due respect to the Examiner, the Examiner does not appear to understand the basic concept of *signal multiplexing*, and thus the rejections simply do not correspond to Applicants' claimed invention.

Applicants' invention is a technique for determining whether or not a particular sensor is type of sensor that has two different outputs that are multiplexed, referred to in the claims as a "signal-value-range multiplex output type sensor." For example, Claim 1 recites:

determining whether the sensor is (a) a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, or (b) not a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, including:

recognizing the sensor as a signal-value-range multiplex output type sensor if the first and second conditions have been met, and

recognizing the sensor as not a signal-value-range multiplex output type sensor if at least one of the conditions has not been met.

Independent Claim 11 recites similar limitations.

None of these references -- *Berger*, *Yun*, and *Slate* -- teaches anything even *remotely similar* to this key concept of Claims 1 and 11: *determining whether or not a particular sensor is a sensor having at least two different outputs that are multiplexed, i.e., a signal-value-range multiplex output type sensor*. In fact, none of *Berger*, *Yun*, or *Slate* teach

anything about a “*sensor having at least two different outputs that are multiplexed*” at all. As discussed above, it appears that the Examiner is not familiar with the concept of *multiplexing* two output signals.

In the Final Office Action, the Examiner argues that *Berger* teaches the claimed feature of determining whether or not a particular sensor is a sensor having at least two different outputs that are multiplexed. The Examiner argues that *Berger* teaches this feature at: “*Berger, figure 1, two different output from sensor 18 and 18' are multiplexed to data wire 16.*” (Final Office Action, top of page 5). For reference, Figure 1 of *Berger* shows:

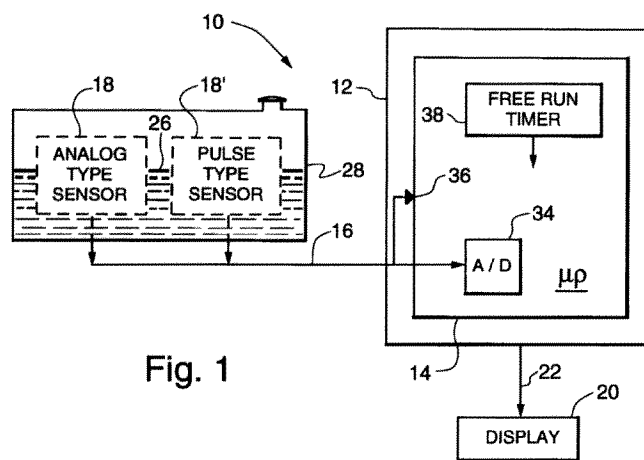


Fig. 1

Berger unquestionably does not teach any multiplexing of sensor outputs. *Berger* teaches a technique for “determining whether *the* liquid level sensor installed in a system is an analog *or* a digital type sensor.” (col. 1, lines 56-59; emphasis added). The system is “operable with *either* an analog type liquid level sensor *or* a digital type liquid level sensor connected to an input wire.” (col. 2, lines 7-9; emphasis added). Referring specifically to Figure 1, *Berger* teaches “In FIG. 1, a liquid level indicator system 10 according to the invention comprises a controller 12 having a microprocessor 14 connected by an analog data wire 16 to *either* an analog type liquid level sensor 18 *or* a digital or pulse type liquid level sensor 18' ...” (col. 2, lines 59-63; emphasis added).

Thus, *Berger* makes it clear that there is *one* liquid level sensor -- *either* an analog type liquid level sensor 18 *or* a digital or pulse type liquid level sensor 18 -- connected to wire 16, which is presumably why the sensors 18 and 18' are illustrated using dashed lines. Thus, it is clear that output signals from sensor 18 cannot be multiplexed with output signals from sensor 18', because both sensors 18 are not present together. Further, *Berger* never mentions or suggests multiplexing multiple different output signals from a single sensor -- i.e., from sensor 18 or sensor 18'. Again, *Berger* clearly does not teach anything about any *multiplexing* of signals at all, much less a type of sensor having at least two different outputs that are multiplexed, much less determining whether or not a particular sensor is a multiplexed-output-type sensor.

Further, both *Yun* and *Slate* also fail to mention or suggests anything about multiplexing of signals, much less multiplexing output signals from a single sensor, as recited in Applicants' claims.

In the Advisory Action, the Examiner argues:

Claim 1, recites

"determining whether the sensor is

*(a) a signal-value-range multiplex output type sensor having at least two different output that are multiplexed, **OR***

(b) not a signal-value-range multiplex output type sensor having at lest two different outputs that are multiplexed".

While claim 11 recites

"the sensor is recognized as a signal-value-range multiplex output type sensor if both determinations are met, and if either determination fails, then the sensor is not recognized as a signal- value-range multiplex output type sensor"

For claim 1 and 11, the claim does not required sensor (a) AND sensor (b) to be presented at the same time. As such, reference Berger teaches a method to determine the liquid level sensor is a type (b) sensor because the sensor in Berger is clearly a sensor does not have two different outputs that are multiplexed together

Applicants have a difficult time understanding this argument, but Applicants believe the Examiner is attempting to interpret Claims 1 and 11 as reciting *having* either a signal-value-range multiplex output type sensor *or* a non-signal-value-range multiplex output type sensor, and that *Berger* teaches a non-signal-value-range multiplex output type sensor, and thus teaches the claimed limitations.

However, the Examiner's attempt to interpret Claims 1 and 11 ignores the clear text of those claims. Claims 1 and 11 clearly recite *determining whether or not a particular sensor is a sensor having at least two different outputs that are multiplexed, i.e., a "signal-value-range multiplex output type sensor."* As discussed above, *Berger* has nothing to do with multiplexing, much less determining whether or not a sensor has multiplexed outputs. Thus, the Examiner's argument does not address the actual limitations of Claims 1 and 11, and thus fails to present a prima facie case of obviousness.

For at least these reasons, Applicants respectfully submit that independent Claims 1, 6, and 11 are patentable over *Berger*, *Yun*, and *Slate*. Therefore, Applicants respectfully request reconsideration and allowance of Claims 1, 6, and 11, and all claims that depend therefrom.

Respectfully submitted,
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